

CLAIMS

What is claimed is:

Sub A' 1. An apparatus comprising:

2 a first interface comprising a plurality of physical communication ports to transmit
3 data to and receive data from a plurality of network devices;

4 a first control unit communicatively coupled to the first interface to process at
5 least a first subset of the data;

6 a second control unit communicatively coupled to the first interface and the first
7 control unit to process at least a second subset of the data;

8 a second interface communicatively coupled between the first interface and the
9 first and second control units such that either one of the first and second control units
10 may communicate with any of the plurality of network devices if the other of the first and
11 second control units fails.

1 2. The apparatus of claim 1, wherein the second interface comprises a plurality of
2 logical communication ports.

Sub A' 3. The apparatus of claim 2, wherein the first interface comprises two logical
2 communication ports for each one of the plurality of physical communication ports.

1 4. The apparatus of claim 1, wherein each of the first and second control units
2 further comprises:

3 a memory device to store one or more data transmission protocols; and

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4 a processor coupled to the memory device to process network data based at
5 least in part upon the one or more data transmission protocols.

1 5. The apparatus of claim 4, wherein the one or more data transmission protocols
2 includes OSPF.

1 6. The apparatus of claim 4, further comprising:
2 a non-volatile memory device coupled to the first and second control units to
3 store configuration data for use by the first and second control units.

1 7. The apparatus of claim 6, wherein the apparatus comprises a chassis, and the
2 non-volatile memory device is embodied within a first blade secured within the chassis
3 and at least one of the first and second control units is embodied within a second blade
4 secured within the chassis.

1 8. The apparatus of claim 1, wherein the first and second interfaces are embodied
2 within an ASIC.

1 9. The apparatus of claim 1, wherein the first control unit is associated with a first
2 network address and the second control unit is associated with a second network
3 address.

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1 10. The apparatus of claim 1, wherein the first and second control units each
2 independently maintain network status information.

1 11. The apparatus of claim 10, wherein the network status information is maintained
2 in a routing table.

1 12. A method comprising:
2 representing a plurality of physical data communication ports as a corresponding
3 plurality of logical data communications ports such that either one of a first control unit
4 and a second control unit communicatively coupled to the physical data communication
5 ports can communicate with any of a plurality of external devices communicatively
6 coupled to the physical data communication ports if the other of the first and second
7 control units fails.

1 13. The method of claim 12, further comprising:
2 maintaining by the first control unit, first address data corresponding to the
3 plurality of external devices; and
4 maintaining by the second control unit, second address data corresponding to
5 the plurality of external devices.

1 14. The method of claim 13, wherein the first control unit maintains the first address
2 data and the second control unit maintains the second address data each according to
3 at least one of a plurality of routing protocols.

